

Defining Beneficial Patterns of Alcohol Consumption: A Survey of Clinicians

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INTRODUCTION

In assessments of the impact of alcohol on health, any discussion of potential benefits of alcohol consumption is typically set aside and a detailed account of the harmful effects of alcohol is presented. However, cataloging the harm without paying some attention to the benefits of drinking offers an unbalanced, indeed biased view of alcohol. This is particularly true given the increasing evidence for a protective effect against the development of coronary heart disease and of benefit in a number of psychological and social domains.

As is evident from several recent publications (Lowe 1994; Single and Leino 1998; Peele and Brodsky, forthcoming; Roche, Single and Heath, forthcoming), no recognized typology of beneficial effects currently exists, nor are those *patterns* of drinking that confer benefit adequately understood. A difficulty is that the measures of exposure to alcohol that have been employed in epidemiological and clinical studies are fairly crude and individual and cultural variation in drinking patterns has been paid little attention. Consequently, the relationship between the pattern of drinking and the range, extent and pattern of both benefit and harm is essentially unexplored (Grant and Litvak 1998).

Benefits from drinking alcohol can be conceptualized and classified on several levels. They include (1) the nature of the benefit, i.e. the area of life in which the benefit occurs; (2) its predictability, or the extent to which the benefit (or harm) derived from drinking is inevitable or uncertain; and (3) whether the benefit was intended by the drinker and alcohol was consumed for a particular purpose.

This paper examines some of the recognized beneficial effects of alcohol consumption and describes a recent survey on benefits conducted among a group of sixty clinicians from 17 countries (Saunders 1998). These key informants include medical practitioners, nurses, psychologists, and social workers who were asked to describe patterns of drinking (including setting and contexts) that they considered to confer benefit. The results of the survey are presented as they apply to the general adult population. The description of beneficial patterns

is intended to take into account cultural differences. It also offers a way in which either benefit or harm from alcohol can be conceptualized and which can aid in developing policies and intervention approaches that minimize harm and maximize the benefits associated with drinking.

TYPES OF BENEFITS

Benefits of alcohol consumption are described in this paper as they relate to life's activities. Many of the categories also reflect the headings that were used in the key informant survey of clinicians described here.

Psychological

When people are asked why they drink alcohol, they reply in the main that it is a pleasant and relaxing thing to do. Psychological benefits for the individual drinker are clearly important. Indeed, so universal is this experience that it might seem to be stating the obvious. These benefits are generally predictable and intended. They can be considered in several categories.

Relaxation

A sense of relaxation is one of the commonest effects of drinking reported by respondents in general household surveys. This has been reported from Europe (Mäkelä and Simpura 1985; Mäkelä and Mustonen 1988; Pernanen 1991), North America (Pernanen 1991), and Australia (Hall et al 1992). Indeed, the widespread experience of this effect was recorded by the Mass Observation studies of public houses in Britain in the late 1930s - "it relaxes me and makes me feel good" (Mass Observation 1943).

In the 1998 survey conducted among clinicians, relaxation was also reported as one of the main psychological benefits of drinking (Saunders 1998). Seventy per cent of respondents reported that alcohol was helpful in facilitating relaxation. Of the total group, 37% specifically mentioned drinking to relax after work. Two respondents (3%) considered that there were secondary benefits for persons in the drinker's social circle. For example, if people drank alcohol after work or after a stressful event, they would be less likely to generate stress in or demands of others.

The pattern of drinking reported as being effective was characterized by the consumption of small amounts of alcohol on a regular basis, and in particular in the company of other people known to the individual.

Happiness

Closely related to relaxation is the sensation of feeling happy and cheerful (Cahalan 1970, Hall 1995). In the first United States national survey on drinking habits, approximately half the (non-problem) drinking respondents reported this effect (Cahalan 1970). This sensation is also experienced by problem drinkers and alcohol dependent people. Indeed, a larger proportion (approximately 80%) of problem and dependent drinkers report this effect.

compared with moderate drinkers.

In addition to survey data, there is a moderately large body of literature describing studies where alcohol has been consumed in experimental laboratory or simulated bar or home settings. Scores for elevated mood change and euphoria are significantly higher following consumption of alcohol (Pliner and Cappell 1974; Smith et al. 1975). Lowe and his colleagues have reported that subjects who had consumed alcohol were happier and laughed more than a comparable group who had not consumed any alcohol (Lowe and Taylor 1997).

A sense of euphoria is one of the most predictable pharmacological effects of alcohol. It is experienced particularly during the upswing of the blood alcohol concentration (BAC) - time curve. When BACs are falling, euphoria is often replaced by dysphoria and malaise, particularly among alcohol dependent individuals.

Cognitive

Most of the literature on the effects of alcohol on cognition has focused on impairment of cognitive function, based on tests of arithmetic ability and visuo-spatial capacity, together with measures of psychomotor performance, such as reaction time. In summary, alcohol consumption reduces cognitive and psychomotor performance in a predictable, dose-dependent manner at BAC levels ranging from 20mg / 100ml to 150mg / 100ml. There is, however, considerable individual variation in the effects. Indeed, a small proportion of subjects demonstrate enhanced performance at BAC levels in the range below 80mg / 100ml.

Creativity

Creativity is an aspect of cognitive function that is reportedly enhanced by the consumption of alcohol. This is part of popular folk lore, particularly in the United States, where six of the seven American Nobel prizewinners for literature are regarded as having been alcohol dependent. Popular wisdom amongst many authors and journalists is that consuming alcohol helps the writer to concentrate on core themes and to ignore peripheral issues that might be distracting.

The empirical basis for these views is meager, but the respondents of the survey cited here reported that intellectual and artistic creativity was enhanced by the use of alcohol. However, most made a distinction between well-known artists and literary figures whose creativity was claimed (by themselves, biographers, and others) to be heightened by the consumption of alcohol, and the rest of humanity whose creative spark would be dulled. Some respondents noted claims that drinking alcohol enables people to focus on the task at hand and to ignore other issues which could cause distraction. Although accepting that this might operate in creative writing, respondents were doubtful that this could be generalized to other areas of intellectual work, particularly to decision making. The patterns of drinking that were considered to have beneficial effects on creative capacity involved often substantial amounts of alcohol.

Social

In nearly every society drinking alcohol is a social activity. Drinking may occur with a peer group, family members, mixed age-sex groups, as part of a ceremonial occasion, with members of a sports team, and with business colleagues. In few societies is drinking predominantly a solitary activity. Drinking alcohol may be for the express purpose of socializing and alcohol consumption is generally associated with broader rather than narrower social networks

Sociability

Sociability is a major reason for drinking alcohol and of equivalent importance to the psychological dimensions of relaxation and happiness. It is identified as a predominant reason for drinking by people from a range of cultures in the developed and developing worlds (Heath 1995). Of course, it is difficult to separate out the pharmacological effects of alcohol expectancies from drinking and from the influence of the setting in which drinking takes place, which is often comfortable and provides for activities such as bar games. Nonetheless, sociability has been a main reason for drinking by college students, other young adults (Wilks and Callan 1990; Lowe 1994), and by older people (Roizen 1983; Hauge and Irgens-Jensen 1990, Hall et al. 1992). There is also an experimental literature which demonstrates that after alcohol consumption subjects are perceived to be more sociable (Babor et al. 1983, Smith et al. 1992).

The results of the survey of clinicians showed that sociability was identified as a benefit of drinking alcohol by 82% of respondents. Frequently mentioned benefits included alcohol's function as a social lubricant, making the party seem "real" and increasing someone's courage in approaching a person of the opposite sex. Six respondents (10%) reported that alcohol increased the truthfulness of people.

According to the survey respondents, the patterns of drinking reported to have these effects involved intakes of 1 to 8 drinks per occasion, with a modal frequency of once per week, and predominately at parties. Some respondents mentioned the need for people drinking in this situation to ensure their safe transport home and to protect themselves from unwanted attention.

Social networks

This variable, which might be considered a product of alcohol's effects on sociability, refers to the number of friends and acquaintances and a person's "connectedness" with them. Drinking tends to bind people together, be it from shared experience, proximity with others in a drinking environment, or as a symbol of acceptance into a peer group. Drinking establishments and clubs serve as a place to gather, separate from the work environment and from the home. They are described by Oldenburg as "the third place," where people can congregate and enjoy each other's company (Oldenburg 1997). Alcohol consumers have larger and more heterogeneous social networks than abstainers. This has been reported by Lyons and colleagues (1995) from a survey of social well-being and health in South Wales.

Views among survey respondents on whether drinking expanded a person's social network were mixed. Whereas the majority (65%) of respondents were of this opinion, a substantial minority (27%) stated it did not enhance one's social circle and indeed might restrict it, especially if drinking became a frequent event. Beneficial effects on networks were seen to come through discovery of common interests (e.g. at parties, sporting clubs, parents' and citizens' meetings) and by identifying a previously distant acquaintance as a good person. Another important role of alcohol was to widen one's business contacts and sometimes to employ this network to conclude specific deals.

Beneficial effects of this nature were associated with periodic convivial drinking, typically of moderate quantities at approximately weekly intervals. Harmful effects on a person's social network were related to heavier and more frequent drinking, leading to a situation where one's social circle would consist exclusively of regular drinkers.

Celebratory events

In many societies, alcoholic drinks occupy a central role in celebrations - to toast people on their birthday, wedding anniversary, promotion, or retirement. Teams involved in competitive sports will drink to congratulate each other on a win and in heading the league table at the end of the season. Certain beverage types, such as champagne, may be preferred in some traditions.

The survey of clinicians confirmed the central role of alcohol in celebratory occasions with 90% of respondents considering this a significant benefit. Some averred that celebration and alcohol could not be separated from each other and used such terms as "absolutely", "goes without saying", and "go hand in hand". Two respondents (3%) recognized this traditional role, but felt it was overstated and that good food and the expectations of participants were more important to the atmosphere.

The amounts of alcohol consumed on these occasions were not commonly specified, but were assumed not to be excessive. Frequency was indicated by the nature of the occasion. Typically, these were annual, e.g. Christmas, New Year, birthdays, and after examinations. The symbolic use of alcohol in communion was described by two respondents.

Social credit

This term is borrowed from Heath (1998) to refer to the reciprocal hospitality shown by people when they offer drinks to friends (for example, when they have extra money) and by organizations when they host receptions and dinners. There is some expectation that what is provided will be repaid at some stage, although this is neither inevitable nor obligatory.

Leisure time

Drinking often serves to draw a boundary between work and leisure time. This may occur in a bar at the end of a shift, or in the boardroom where partners and executives of a firm may gather at the end of a day's (or a week's) work. Sometimes the drinking partners are peers, sometimes it is a mixed status group. In Japan, for example, it is usual for men of various

levels of seniority to drink together in the evenings. This setting allows junior people to express themselves to their superiors in a way that would be unthinkable in the office.

Health

Physical health

As indicated earlier, interest in understanding the beneficial effects of alcohol increased dramatically when consistent evidence for a cardio-protective effect of alcohol emerged. Specifically, for some groups of individuals (notably men from 35-40 years until their 70s and for women over 50) moderate alcohol consumption reduces the risk of morbidity and mortality from coronary heart disease by approximately 30-50% compared with abstainers

As coronary heart disease is the most common cause of death in many developed countries, any protective effect should have a substantial impact on reducing aggregate mortality (from all causes), and indeed it does. All-causes mortality is approximately 20% lower in moderate drinkers than in total abstainers. Other conditions for which a protective effect of moderate consumption has been demonstrated include gallstones, thrombotic stroke, endometrial cancer, and in some studies hypertension. Alcohol consumption also has beneficial effects on blood lipid levels, coagulation and clot lysis, and these are likely to represent (some of) the mechanisms by which the cardio-protective effect arises.

The key informant survey mirrored this focus on coronary heart disease. The most frequently reported health benefit was reduction in risk of coronary heart disease. Fifty per cent of respondents noted that there was evidence for reduction in incidence, morbidity and/or mortality from this condition in drinkers compared with non-drinkers. Other perceived benefits were individually identified by only a small minority of respondents. They included lowering of blood pressure (7%), lowering of blood cholesterol levels (5%), treatment of influenza (4%), and as a laxative (2%). Twenty per cent of respondents reported benefits within the umbrella of general health and/or lessened all-causes mortality. Eighteen per cent of respondents considered there were no objective health benefits.

Health benefits were associated with consumption of what would be generally regarded as small or moderate amounts of alcohol and at a frequency that ranged from once per week to daily.

Subjective well-being and quality of life

There has been increasing emphasis in the general health and treatment literature on measures of subjective well-being, quality of life, and reported contentedness. Quality of life is now regarded as an essential measure in assessments of new treatments for a range of disorders including rheumatoid arthritis and depression using controlled clinical trials. It is viewed as complementary to objective measures of function, impairment, and disability. Subjective perceptions of health and measures of quality of life correlate well with objective measures of function, freedom from pain and disease activity.

In a large general population survey conducted in Finland, level of alcohol consumption

correlated with self-perception of good health (Poikolainen et al. 1996). This does not imply a causal relationship. It is likely that people who feel well and are healthy have more opportunities to drink after work, at parties, and in other social settings.

In the survey conducted for the purposes of this analysis, the majority of respondents (73%) considered that subjective well-being could be enhanced by alcohol. Some provided specific examples which were typically couched in general terms such as "contentment". Five respondents (8%) had the opposite viewpoint. Most respondents did not indicate whether particular patterns of drinking had a desirable effect in this regard.

Medicinal

The medicinal benefits are classified separately from the medical and physiological effects described above. Alcohol containing drinks in the form of folk remedies have been used throughout history as cures for various illnesses, although the value of these preparations has not been investigated thoroughly. This aspect is separate from the use of alcohol to alleviate negative mood states, stress, and tension.

Cure for common ailments

Alcohol has a traditional role in many forms of medicine. In Chinese medicine various remedies containing alcohol were popular at least 2,000 years ago. Xiao (1995) describes the *Compendium of Materia Medica* in the Ming Dynasty, which listed 79 different alcohol containing drinks. In China and in Western medicine alcohol has been taken as a general tonic for relief of the common cold, to treat kidney disorders, and to aid digestion. It has seen use in the treatment of gastroenteritis and has been shown recently to reduce pathogenic intestinal flora. Alcohol has also been used for millennia as an analgesic after injuries and during the resetting of fractured bones. Some of these uses continue today in folk remedies and alcohol is part of many pharmaceutical preparations, including cough syrups and iron supplements.

Stress reduction

Just as alcohol can facilitate relaxation in company, it can also be used as a calmant in states of anxiety and tension. Stress reduction featured prominently in the review of beneficial effects by Baum-Baicker in 1985. This property of alcohol is cautiously placed among the medicinal effects. Repeated self-medication of anxiety with alcohol may lead to harmful patterns of drinking. In that anxiety occurs when blood alcohol levels decline, this may lead to a cyclical process whereby alcohol induces an anxiety state which is temporarily alleviated by further drinking. Indeed, this was the basis of the tension-reduction theory of alcohol dependence (Cappell and Greeley 1987). Krause (1995) reported that alcohol reduced the negative impact of some life events, but the effect was inconsistent. Minor problems had less adverse effect, but the impact of major ones may be exacerbated by drinking.

Spiritual and existential

Religious

Alcohol has a central role in Christianity. The turning of water into wine, for example, is one of the miracles recorded in the New Testament. In the Last Supper, wine was used by Christ to signify his blood, which would be shed for man's salvation. This has formed the basis of the Christian Eucharist, or Communion, since that time. The Judaic tradition also adopts a ritual attitude towards drinking, using alcohol chiefly for the purposes of communion (Keller 1979). Alcohol is integrated into religious ceremonies both in the home and in the place of worship, including meals and rites of passage. Alcohol's symbolic significance in this regard is not generally articulated in the literature as a benefit, but it should be noted as part of the life of a substantial proportion of the world's population.

Gustatory

Taste and texture

To most drinkers, alcoholic drinks taste pleasant and refreshing. How they are perceived by the drinker depends very much on the context of drinking. Beer's somewhat bitter flavor is sometimes regarded as desirable after a person has been undertaking heavy physical work. Sweeter drinks are more commonly taken as a cocktail or after a meal. The taste and texture are two of the characteristics of wines much discussed by connoisseurs.

Complement to food

Various types of beverage have a clear relationship to meals. They may be taken before meals as an aperitif to stimulate the appetite. Wine and beer tend to be consumed during a meal, following which a fortified wine such as port, spirits, or liqueurs may be taken. Alcoholic drinks are regarded in many cultures as an invaluable aid to digestion.

In the 1998 survey of clinicians discussed here, alcohol was reported as a valued complement to food by 83% of respondents. Stimulation of appetite by alcohol was specifically mentioned by 28%, and the particular role of wine as a drink that would complement a meal was noted by 40%. The context of drinking was mentioned far more frequently under this heading than were typical amounts or patterns of drinking. Highly specific associations of certain beverage types with particular foods were recorded. They included beer with potato chips, nuts, meat pies, and pizzas; red wine with various meats and cheese; white wine with oriental food and dessert; spirits-based mixed drinks with Mexican or Caribbean food; and champagne with strawberries.

DEVELOPING A MODEL TO ENCAPSULATE BENEFIT AND HARM

Alcohol consumption confers benefits. The benefits are widespread. Most are predictable and intended, though some, such as the cardio-protective effect, might be regarded as serendipitous. Beneficial patterns of drinking are recognized in many cultures, but our knowledge of them is rudimentary. At the present time, beneficial patterns can be described only in anecdotal terms, although the convergence of views in the clinicians' survey is persuasive. We know nothing of the relationship between the amount, frequency, variability, beverage type, setting and context of drinking, and the specific benefits ascribed to alcohol. Only a little more is known of the relationship of these parameters with harm.

We are still far from developing a model that can link different patterns of drinking to benefit and harm for the general population. However, a concept that may prove useful in our efforts is represented in Figure 1. This is the “leaf of life” which attempts to encapsulate net benefit and harm in relation to alcohol consumption, and summarizes alcohol’s effects on other aspects of life as its saliency changes. The model can be adapted to provide a quantitative portrayal of, for example, social networks, work, and leisure time activities, together with overall richness of life.

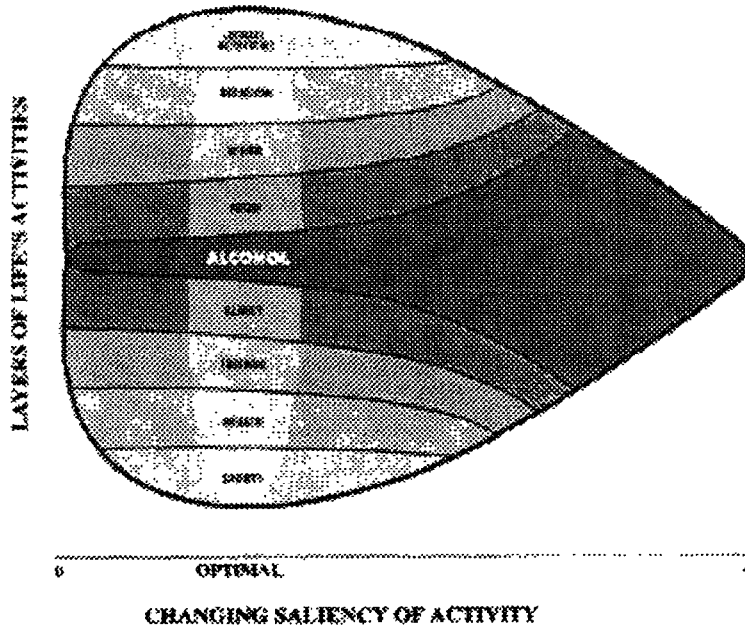


Figure 1 The “leaf of life”, representing the relationship between the saliency of alcohol and other activities in an individual’s life and the effect of this relationship on the overall quality of life.

Life is multi-layered and the short axis represents the many activities that make up its breadth, richness, and overall quality. The breadth of the leaf is determined by the number of layers and their individual widths, which, in turn, depend on the prominence afforded them in an individual’s life. Although alcohol is placed at the center in this diagram, that is merely because it is the issue under consideration. The long axis, on the other hand, represents the changing saliency of an activity, in this case alcohol, in a person’s life. Any activity that has the capacity to influence other aspects of a person’s life could just as easily be substituted.

At the left-hand side, alcohol intake is zero. Breadth of life is wide, but not maximal. When saliency and presumably also the intake of alcohol are low, there is a broadening of life due to factors such as increases in health, subjective well-being, sociability, and the network of friends. Other “layers of life” may be added. The breadth of life increases to a maximal point, which is the drinking pattern that results in net maximum benefit and minimal harm. However, the setting and context of drinking are key components, too. A pleasant, safe environment with congenial companions would enhance enjoyment as well as benefit and

limit the risk of certain forms of harm.

It is important to note that the breadth of the layer attributed to alcohol does not correspond to level of consumption and should not be equated with it. For people with more harmful patterns of drinking, net harm may become evident with large amounts per occasion in an inappropriate setting. Alcohol is more salient in the person's life and, as a result, other activities become more restricted and narrower and may be shed altogether. Overall quality of life diminishes. At the most harmful patterns of drinking, alcohol is the central feature of the person's life, dominating and compressing other activities. For some individuals, alcohol consumption at this point may actually be lower and the drinking pattern may paradoxically seem less harmful. However, this may be due more to poor health, restricted income, and fewer opportunities for drinking. This is not a deterministic model. It does not assume there is an inevitability in any pattern of drinking leading to a more harmful one. Harmful patterns of drinking can be reversed to become beneficial ones, but, clearly, as alcohol becomes a salient feature of life, the likelihood of harmful patterns maturing into beneficial ones becomes increasingly remote.

CONCLUSION

The approach developed in this paper - including the "leaf of life" representation - is intended to provoke further thought and discussion about what actually constitutes beneficial drinking patterns. The challenge for health advocates and for the beverage alcohol industry is to find the middle ground where alcohol can enhance quality of life and contribute to overall health status. This paper is simply an attempt to begin that process of exploration.

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